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File: USPT

Mar 22, 1983

DOCUMENT-IDENTIFIER: US 4377569 A

TITLE: Method of treating animals to resist infectious diseases

ABPU:

collecting bovine colostrum milk,

ABPU:

removing the casein from the colostrum milk to obtain bovine colosteral whey,

BSPR:

Bovine milk contains one or more proteins of the globulin group although the amount present is usually quite small. The globulin group is generally considered to be comprised of lactoglobulin or beta lactoglobulin. The globulin of milk is very important. Under certain conditions it enables a mother to transmit immunity toward certain infections to her suckling. This takes place during the first two or three days of the young animal's life.

BSPR:

In applicant's earlier U.S. Pat. No. 4,051,235, the method of preparing bovine colostrum is described. It has been found that the bovine colostrum of the earlier patent may be air dried and added to animal feeds without the necessity of injecting the colostrum into the animal.

BSPR:

The colostrum milk is collected and the antibodies are removed therefrom and are manufactured into a dried product which may be added to animal feeds to benefit other animals which may be subjected to the diseases which the particular antibodies are peculiar to. Contrary to the prior beliefs of dairy scientists, the other animals which will benefit by having the dried colostrum product added to their feeds include both adult cattle as well as animals of other species such as the goat, sheep, pig and mare.

DEPR:

The defatted colostrum milk is then precipitated by adding 1.5 mg of CaCl₂ per liter of milk and by adding one tablet (1.5 gram) of commercially available rennin per liter of milk. The mixture is then thoroughly stirred. The solution is then heated to 20.degree.-80.degree. C. and again stirred. The solution is permitted to stand for 2-5 hours and the casein in the solution is then removed by filtration. The resultant solution is termed "bovine colosteral whey".

DEPR:

The whey is then dialyzed against tap water at 47.degree. F. with saline added for approximately 96 to 120 hours. The pH of the dialysate is adjusted to 4.0 to 4.5 with acetic acid. The whey is then precipitated by placing the same in vats having a controlled temperature of 35.degree.-65.degree. F. The supernatant is siphoned off and centrifuged. The supernatant is then clarified by filtration. The titre of the solution is determined in conventional fashion and a water, saline and 0.3% Phenol mixture is added to make a final bovine IGG concentration of 100 mg%.

DEPR:

The defatted colostrum milk is then precipitated by adding 1.0-2.0 mg of CaCl.sub.2 per liter of milk and by adding 0.5-1.5 tablets of commercially available rennin per liter of milk. The mixture is then thoroughly stirred. The solution is then heated to 20.degree.-80.degree. C. and again stirred. The solution is permitted to stand for 2-5 hours and the casein in the solution is then removed by filtration. The resultant solution is termed "bovine colosteral whey".

DEPR:

The whey is then dialyzed against tap water at 40.degree.-54.degree. F. with saline added for approximately 96 to 120 hours. The pH of the dialysate is adjusted to 4.0 to 4.5 with acetic acid. The whey is then precipitated by placing the same in vats having a controlled temperature of 35.degree.-65.degree. F. The supernatant is siphoned off and centrifuged. The supernatant is then clarified by filtration. The titre of the solution is determined in conventional fashion and a water, saline and 0.3% Phenol mixture is added to make a final bovine IGG concentration of 100 mg%.

DEPR:

The dry product of Examples I and II, when added to the animal feed, provides the animals with the necessary antibodies to enable the animal to successfully resist the diseases which the particular antibodies are peculiar to.

DEPR:

The effectiveness of bovine colostrum in the gut has been demonstrated by tests which show that as little as one ounce of colosteral whey destroys Coliform 99 bacteria in the gut of young calves. In tests in which five grams of the dry product of Examples I and II was fed with feed, sub-clinical mastitis has been successfully reduced 60% in three herds with a thirty cow average, using the CMT paddle test. Most sub-clinical mastitis was found to be caused by Staph, Strep combinations. There are naturally occurring antibodies to Staph and Strep in the colostrum milk obtained for producing the dry product described above.

CLPR:

4. The method of claim 3 wherein the antibodies particular to mastitis are naturally occurring in the bovine colostrum milk.

CLPU:

collecting bovine colostrum milk including antibodies particular to said infectious diseases,

CLPU:

removing the casein from the colostrum milk to obtain bovine colosteral whey,